



FLAKE SCAN

Analysis system for plastic flakes and regrind

- Universally applicable in plastics recycling and processing
- Analyze samples for polymer types, false colors, and metal particles within minutes
- Perform manual, visual, and thermal analyses with less effort



The challenge

The guarantee of high quality of plastic flakes and regrind is crucial in determining whether plastic processors and manufacturers can profitably use and sell plastic recyclate. Depending on how the recyclate will be used, but also as a

means of evaluating the recycling sorting process, elaborate manual, visual, or thermal sample analyses are often necessary in order to assess the quality of a batch of materials. Such sample analyses are hardly representative, and furthermore require additional resources, costs, and time.

Device features

- Analyzes flakes and regrind of materials such as PET, PP, HDPE, and mixed plastic flakes according to their material composition for polymer types, false colors, and metal particles
- Combine up to three sensors: Color sensor, near-infrared sensor, metal sensor (optional)
- Sample volume: up to 8 liters for representative results
- Throughput: up to 20 kg/h
- Simple operation via touchscreen
- Automatic reporting and archiving of analysis results

Performance characteristics

With the FLAKE SCAN analysis system, it takes only a few minutes to precisely determine the quality of plastic flakes and regrind.

Efficient

- Analyze samples for polymer types, false colors, and metal particles within minutes
- Quickly assess the composition of batches of plastic flakes



Precise

Automatically performs precise, reproducible analyses of material samples with the help of up to three integrated sensors:

- Color sensor
- NIR sensor
- Metal sensor (optional)



Profitable

FLAKE SCAN virtually eliminates the need for labor-intensive sample analyses and significantly reduces the efforts involved in performing manual, visual, and thermal inspections. By enabling quick and informed decisions about the viability of plastic flakes and regrind, FLAKE SCAN helps increase the profitability of using plastic recyclate. Furthermore, the results provide valuable insights into the recycling process and the functionality of various components.



Quality control of plastic flakes

Manual analysis vs. sensor-based FLAKE SCAN



Criteria	Manual analysis	FLAKE SCAN	Benefits	
Throughput rate	Low	High		<ul style="list-style-type: none"> ■ Higher representativity of results ■ Less manpower required due to time savings ■ 100% of sample analysis and zero human error ■ Higher insight on material purity ■ Allows fact-based decisions
Analysis time	High	Low		
Sample amount per day	Low	High		
Sample size	Low	High		
Analysis accuracy	Mid	High		
Representativity	Low	High		

SesoDesk operating software

Inspecting for polymer types, false colors, and metal particles

Analysis results can be displayed either in a table or in diagrams. Should predefined limits for polymer types or false colors be exceeded, this will be marked accordingly in the table. The amount of identified metal contaminants will also be displayed.

The screenshot shows the SesoDesk software interface with the following data:

Color					Material				
Color	Good	Area- %	Limit	Status	Material	Good	Area- PPM	Limit	Status
Blue-Light	●	4.75	0	●	PET	●	996980	0	●
Clear	●	92.79	0	●	ABS	●	6	0	●
Black	●	0.12	0	●	PA	●	42	0	●
Blue_Dark	●	1.11	0	●	PC	●	0	0	●
Blue_Opaq	●	0.26	0	●	PE	●	296	0	●
Green	●	0.02	0	●	PET G	●	449	0	●
Green_Dark-Opaq	●	0.02	0	●	PLA	●	228	0	●
Magenta	●	0	0	●	PP	●	542	0	●
Magenta_Dark-Opaq	●	0	0	●	PS	●	192	0	●
Orange_Brown	●	0.01	0	●	PVC	●	114	0	●
Orange_Brown_Dark-Opaq	●	0.04	0	●	SiliconGummi	●	0	0	●
Red	●	0	0	●	Undefined	●	1151	0	●
Red_Dark-Opaq	●	0.03	0	●	Wood	●	0	0	●

Additional interface elements include: Metal 16 (with a red X icon), Metal Detector Status, Start/Stop buttons, a Completed status bar for analysis 2020-2794Clear-Flakes, 7/6/2020 7:04:26 AM, 2789 g, and a Details button.

Saving data

From the "History" menu, you can quickly compare the purity and color quality of the current batch with those of archived samples.

The screenshot shows the SesoDesk software interface with the History menu selected. The chart displays material weight in PPM for various materials over time.

History Menu:

- Product: 2020-2831, 2020-2896
- Color: Material
- Area: Weight
- Total Purity: Individual Purity
- Displayed: - 10 +

Chart: 2020-2896 - Material Weight - PPM

The chart shows material weight in PPM (Y-axis, 0 to 1,000,000) over time (X-axis, 5.6.2020 4:32 to 5.7.2020 7:23). The materials are stacked in the following order from bottom to top: PET, PC, PA, ABS, PP, PS, PVC, PE, PLA, Wood, PET G, SiliconGummi, and Undefined.

VISUDESK visualization software

With optional VISUDESK visualization software, you can **see all process and usage data from your Sesotec sorting and metal detection devices in one comprehensive dashboard**. This is possible by means of an **OPC UA machine communication protocol** implemented in each device as well as your company server. The **browser-based interface** is **accessible both on desktop and mobile**.

This dashboard provides a **comprehensive overview of your entire sorting line** as well as information about **specific groups of devices**, enabling you to **quickly create equipment configurations** and **automate product changes**.

Seamless backwards compatibility is possible via established VISUTEK protocols. **Customizable e-mail and text alerts** keep you informed about critical developments in the machine status.

Service

Remote Access

Problems on machines can often be remedied via remote access. Sesotec service technicians have direct access to your machines via Ethernet connection and can carry out error analysis, optimization and parameter settings. Many of our devices offer this functionality as standard.



Remote Support with Augmented Reality

Pictures tell more than a thousand words- and in addition to telephone support and remote access, Sesotec also offers video support with augmented reality. For video support, you simply download a free app on smartphone / tablet and send us the access data. Our support center will then guide you through the troubleshooting process step by step until the incident is solved.



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